INDEX TO AUTHORS

A

Anderson, Ernest. The mucilage from slippery elm bark, 163

Anderson, R. J. See CROWDER and ANDERSON, 399, 487

B

Bakwin, Harry. See BODANSKY and BAKWIN, 747

Barker, H. Albert. The refractivity of heat-denatured egg albumin, 667

Bauguess, Lyle C., and **Berg, Clarence P.** Tryptophane metabolism. V. Growth on tryptophane-deficient diets supplemented with β-3-indoleacrylic, α-oximino-β-3-indolepropionic, and *l*- and *dl*-β-3-indolelactic acids, 675

— and —. VI. The production of kynurenic acid from indole derivatives, 691

Baur, Lorenz. See BURKHART, BAUR, and LINK, 171

Berg, Clarence P. Tryptophane metabolism. IV. The influence of optical activity on the utilization of tryptophane for growth and for kynurenic acid production, 373

—. See BAUGUESS and BERG, 675, 691

Bergmann, Werner. Contributions to the study of marine products. II. The sterols of mollusks, 317

—. III. The chemistry of ostreasterol, 553

Block, Richard J. The basic amino acids of keratins. The basic amino acid content of human finger nails and cattle horn, 339

—. The basic amino acids of serum proteins. II. The effect of heating to fifty-eight degrees, 343

—, **Darrow, Daniel C.,** and **Cary, M. Katherine.** The basic amino acids of serum proteins. III. A chemical relationship between serum proteins of various origins, 347

Bodansky, Aaron. Phosphatase studies. VI. Non-osseous origins of serum phosphatase. Its increase after ingestion of carbohydrates, 473

—. VII. Inorganic phosphorus and phosphatase of the serum in new born puppies, 717

Bodansky, Oscar, and **Bakwin, Harry.** The phosphatase hydrolysis of diphospho-*l*-glyceric acid, 747

Bonoff, R. See BODANSKY, 473, 717

XUM

Boyd, William C., and **Hooker, Sanford B.** Some analyses of azoproteins: casein, gelatin, and zein coupled with arsanilic acid, 329

Boyd, William F. See MAY, MARTINDALE, and BOYD, 255

Briggs, A. P. Excretion of ammonia and neutrality regulation, 231

Brooke, Richard O., Smith, Arthur H., and **Smith, Paul K.** Inorganic salts in nutrition. VII. Change in composition of bone of rats on a diet poor in inorganic constituents, 141

Burkhart, Bernard, Baur, Lorenz, and **Link, Karl Paul.** A micromethod for the determination of uronic acids, 171

C

Caldwell, M. L. See SHERMAN, CALDWELL, and DOEBBELING, 501

Cary, M. Katherine. See BLOCK, DARROW, and CARY, 347

Childs, Hazel M. See LOONEY and CHILDS, 53

Chow, Bacon F., and **Kamerling, S. E.** The catalytic effect of ferricyanide in the oxygen absorption of oleic acid, 69

Clarke, H. T. See HERBST and CLARKE, 769

Coons, Callie Mae, Coons, R. R., and **Schiefelbusch, Anna T.** The acid-base balance of the minerals retained during human pregnancy, 757

Coons, R. R. See COONS, COONS, and SCHIEFELBUSCH, 757

Craft, Harold A. See DU VIGNEAUD, CRAFT, and LORING, 81

Craig, Lyman C. See JACOBS and CRAIG, 547

Crowder, J. A., and **Anderson, R. J.** A contribution to the chemistry of *Lactobacillus acidophilus*. II. Composition of the neutral fat, 399

— and —. III. The composition of the phosphatide fraction, 487

Curtis, George H. See WEST, HOAGLAND, and CURTIS, 627

Cutler, Charles H. See DEUEL, GULICK, GRUNEWALD, and CUTLER, 519

D

Darrow, Daniel C. See BLOCK, DARROW, and CARY, 347

Davis, Burt Lincoln, Jr., and **Van Winkle, Walton, Jr.** The effect of insulin and epinephrine on the amino acid content of the blood of adrenalectomized rabbits, 207

Deere, Charles J. See HARNED and DEERE, 727

Deuel, Harry J., Jr., Gulick, Margaret, Grunewald, Carl F., and **Cutler, Charles H.** The sexual variation in carbohydrate metabolism. III. The comparative glycogen and fat content of the liver and muscles of rats and guinea pigs, 519

Doebbeling, S. E. See SHERMAN, CALDWELL, and DOEBBELING, 501

Dominguez, R., and **Pomerene, Elizabeth.** Studies of the renal excretion of creatinine. I. On the functional relation between the rate of output and the concentration in the plasma, 449

Dotti, Louis B. Studies in the carbohydrate metabolism of the rabbit. I. The true blood sugar value in convulsions due to insulin administration, 535

Dunn, Max S., Redemann, C. E., and **Smith, Nathaniel L.** The synthesis of serine, 511

E

Edwards, Beatrice G. See EVERETT, EDWARDS, and SHEPPARD, 11

Ellis, L. N. See SHERMAN and ELLIS, 91

Emerson, Charles P., Jr. See HELMER and EMERSON, 157

Evans, E. A., Jr. See JENSEN and EVANS, 307

Eveleth, Donald F. The blood chemistry of swine. I. Blood changes following the ingestion of glucose, 559

Everett, Mark R., Edwards, Beatrice G., and **Sheppard, Fay.** The nature of the sugar of normal urine. II. The behavior of carbohydrates in bromine water and the ketose of normal urine, 11

Everett, Mark R., Sheppard, Fay, and **Johnson, Erma O.** The precipitation of nitrogenous substances by alkaline mercuric reagents, with special reference to urine, 1

Eversole, W. G., Ford, Leonard A., and **Thomas, G. Wilson.** The nature and amount of non-diffusible calcium in protein sols, 107

F

Ford, Leonard A. See EVERSOLE, FORD, and THOMAS, 107

Foster, G. L. A comparison of the effects of administration of iodide and diiodotyrosine on the iodine and thyroxine content of the thyroid, 497

Friedemann, Theodore E. See GRAESER, GINSBERG, and FRIEDEMANN, 149

G

Gallagher, T. F., and **Koch, F. C.** The effect of alkali on the testicular hormone, 611

Gersdorff, Charles E. F. See JONES and GERSDORFF, 99

Ginsberg, Julius E. See GRAESER, GINSBERG, and FRIEDEMANN, 149

Graeser, James B., Ginsberg, Julius E., and **Friedemann, Theodore E.** A method for the analysis of tissues, 149

Grunewald, Carl F. See DEUEL, GULICK, GRUNEWALD, and CUTLER, 519

XUM

Gulick, Margaret. See DEUEL, GULICK, GRUNEWALD, and CUTLER, 519

H

Hallman, L. F. See BODANSKY, 473, 717

Harned, Ben K., and **Deere, Charles J.** The induced oxidation of cyanide, 727

Hastings, A. Baird, and **Shock, Nathan W.** Studies of the acid-base balance of the blood. II. A nomogram for calculation of acid-base data for blood, 575

—. See SHOCK and HASTINGS, 565, 585

Haury, Victor G. See HIRSCHFELDER, 647

—. See HIRSCHFELDER and SERLES, 635

Heidelberger, Michael, and **Menzel, Arthur E. O.** Protein fractions of the human strain (H-37) of tubercle bacillus, 655

Helmer, O. M., and **Emerson, Charles P., Jr.** The iron content of the whole blood of normal individuals, 157

Herbst, R. M., and **Clarke, H. T.** Oxidation of amino acids by silver oxide, 769

Hirschfelder, Arthur D. Effect of renal insufficiency upon plasma magnesium and magnesium excretion after ingestion of magnesium sulfate, 647

— and **Serles, Earl R.** A simple adaptation of Kolthoff's colorimetric method for the determination of magnesium in biological fluids, 635

Hoagland, Charles L. See WEST, HOAGLAND, and CURTIS, 627

Hollander, Franklin. Studies in gastric secretion. V. The composition of gastric juice as a function of its acidity, 33

Hooker, Sanford B. See BOYD and HOOKER, 329

Howell, Stacey F., and **Sumner, James B.** The specific effects of buffers upon urease activity, 619

J

Jacobs, Walter A., and **Craig, Lyman C.** The ergot alkaloids. II. The degradation of ergotinine with alkali. Lysergic acid, 547

Jensen, H., and **Evans, E. A., Jr.** Chemical studies on toad poisons. VI. Ch'an su, the dried venom of the Chinese toad, and the secretion of the tropical toad, *Bufo marinus*, 307

Johnson, Erma O. See EVERETT, SHEPPARD, and JOHNSON, 1

Jones, D. Breese, and **Gersdorff, Charles E. F.** The effect of dilute alkali on the cystine content of casein, 99

K

Kamerling, S. E. See CHOW and KAMERLING, 69

Karjala, Sulo. See NIEMANN, KARJALA, and LINK, 189

Kertesz, Z. I. Glucoreductone for the standardization of 2 , 6-dichlorophenolindophenol solutions used for the estimation of ascorbic acid (vitamin C), 483

Kleiner, Israel S., and **Tauber, Henry.** Studies on trypsin. I. The chemical nature of trypsin, 267

—. See TAUBER and KLEINER, 259, 271

Koch, F. C. See GALLAGHER and KOCH, 611

Köck-Molnar, Klara. See RAPPAPORT and KÖCK-MOLNAR, 29

L

Levene, P. A., and **Stiller, Eric T.** The synthesis of ribose-5-phosphoric acid, 299

— and **Tipson, R. Stuart.** N-Methyl uridine and its bearing on the structure of uridine, 385

Lewis, Howard B. See LOUGH and LEWIS, 601

—. See VIRTUE and LEWIS, 59, 415

Light, Arthur B., and **Warren, Clark R.** Creatinuria among adolescent males, 121

Link, Karl Paul. See BURKHART, BAUR, and LINK, 171

—. See MORELL and LINK, 183

—. See NIEMANN, KARJALA, and LINK, 189

—. See NIEMANN and LINK, 195, 205, 743

Link, Karl Paul. See NIEMANN, MCCUBBIN, and LINK, 737

Looney, Joseph M., and **Childs, Hazel M.** A comparison of the methods for the collection of blood to be used in the determination of gases, 53

Loring, Hubert S. See DU VIGNEAUD, CRAFT, and LORING, 81

Lough, S. Allan, and **Lewis, Howard B.** The reaction of nitrous acid with cystine and related sulfur-containing compounds, 601

M

MacLeod, Grace. See ROSE, VAHLTEICH, and MACLEOD, 217

Martindale, Ruth. See MAY, MARTINDALE, and BOYD, 255

Matlack, M. B., and **Sando, Charles E.** A contribution to the chemistry of tomato pigments. The coloring matter in American red and purple tomatoes (*Lycopersicum esculentum*), 407

Mattill, H. A. See OLCOTT and MATTILL, 423

May, Clarence E., Martindale, Ruth, and **Boyd, William F.** The isolation and detection of bilirubin, 255

McCubbin, Robert J. See NIEMANN, MCCUBBIN, and LINK, 737

Menzel, Arthur E. O. See HEIDELBERGER and MENZEL, 655

XUM

Milner, Harold W. See SMITH and MILNER, 437

Morell, Sam, and **Link, Karl Paul.** The methylglycosides of the naturally occurring hexuronic acids. II. The kinetics of the hydrolysis of α-methyl-*d*-galacturonide, 183

N

Neuwirth, Isaac. Fluctuations of the blood sugar *in vitro*, 129

Niemann, Carl, Karjala, Sulo, and **Link, Karl Paul.** Synthesis of the hexuronic acids. III. The synthesis of *dl*-alluronic acid from allomucic acid, 189

— and **Link, Karl Paul.** The composition of an aldobionic acid from flaxseed mucilage, 205

— and —. Synthesis of the hexuronic acids. IV. The synthesis of *d*-galacturonic acid from *d*-galactose, 195

— and —. VI. The synthesis of *l*-galacturonic acid from *l*-galactose, 743

—, **McCubbin, Robert J.,** and **Link, Karl Paul.** Synthesis of the hexuronic acids. V. The synthesis of *l*-mannuronic acid from *l*-mannosaccharic acid, 737

Nugent, R. L., and **Towle, L. W.** The specific gravity of synthetic solutions of serum albumin and serum globulin, 395

O

Olcott, H. S., and **Mattill, H. A.** Vitamin E. I. Some chemical and physiological properties, 423

P

Palmer, A. H. The preparation of a crystalline globulin from the albumin fraction of cow's milk, 359

Pfiffner, J. J., Swingle, W. W., and **Vars, Harry M.** The cortical hormone requirement of the adrenalectomized dog, with special reference to a method of assay, 701

Phillips, Paul H., and **Stare, F. J.** The distribution of a reducing substance (vitamin C) in the tissues of fluorine-fed cows, 351

Platt, Muriel E., and **Schroeder, E. F.** Glyoxalase. I. The applicability of the manometric method to the study of glyoxalase, 281

Pomerene, Elizabeth. See DOMINGUEZ and POMERENE, 449

R

Rappaport, Friedrich, and **Köck-Molnar, Klara.** An improvement in the Van Slyke method for blood gas analysis, 29

Redemann, C. E. See DUNN, REDEMANN, and SMITH, 511

Root, Raymond W. The combination of carbon monoxide with hemocyanin, 239

Rose, Mary Swartz, Vahlteich, Ella McCollum, and **MacLeod, Grace.** Factors in food influencing hemoglobin regeneration. III. Eggs in comparison with whole wheat, prepared bran, oatmeal, beef liver, and beef muscle, 217

Ross, John R., and **Shaw, Margaret M.** The effect of dehydration on the pancreatic and intestinal enzymes, 131

Ross, William F. The spectroscopic identification of phenylalanine in protein material, 531

S

Salit, Peter Waldemar. Calcium content of the aqueous and vitreous humors and serum, 275

Sando, Charles E. See Matlack and Sando, 407

Schiefelbusch, Anna T. See Coons, Coons, and Schiefelbusch, 757

Schroeder, E. F. See Platt and Schroeder, 281

Serles, Earl R. See Hirschfelder and Serles, 635

Sharlit, Herman. A method for the quantitative estimation of indoxyl compounds in blood, 115

Shaw, Margaret M. See Ross and Shaw, 131

Sheppard, Fay. See Everett, Edwards, and Sheppard, 11

—. See Everett, Sheppard, and Johnson, 1

Sherman, H. C., Caldwell, M. L., and **Doebbeling, S. E.** Further studies upon the purification and properties of malt amylase, 501

— and **Ellis, L. N.** Necessary *versus* optimal intake of vitamin G (B_2), 91

Shock, Nathan W., and **Hastings, A. Baird.** Studies of the acid-base balance of the blood. I. A microtechnique for the determination of the acid-base balance of the blood, 565

— and —. III. Variation in the acid-base balance of the blood in normal individuals, 585

—. See Hastings and Shock, 575

Smith, Arthur H. See Brooke, Smith, and Smith, 141

Smith, James H. C., and **Milner, Harold W.** Carotene. VII. Physical properties of carotenes from different plant sources, 437

Smith, Nathaniel L. See Dunn, Redemann, and Smith, 511

Smith, Paul K. See Brooke, Smith, and Smith, 141

Snell, Cornelia T. The ultrafiltration of malt amylase solutions, 43

Somogyi, Michael. The solubility and preparation of phosphorus- and nitrogen-free glycogen, 245

Stare, F. J. See Phillips and Stare, 351

Stiller, Eric T. See Levene and Stiller, 299

XUM

Sumner, James B. See HOWELL and SUMNER, 619
Swingle, W. W. See PFIFFNER, SWINGLE, and VARS, 701

T

Tauber, Henry, and **Kleiner, Israel S.** The chemical nature of rennin, 259
— and —. Studies on trypsin. II. The effect of trypsin on casein, 271
—. See KLEINER and TAUBER, 267
Thomas, G. Wilson. See EVERSOLE, FORD, and THOMAS, 107
Tipson, R. Stuart. See LEVENE and TIPSON, 385
Towle, L. W. See NUGENT and TOWLE, 395

V

Vahlteich, Ella McCollum. See ROSE, VAHLTEICH, and MACLEOD, 217
Van Winkle, Walton, Jr. See DAVIS and VAN WINKLE, 207
Vars, Harry M. See PFIFFNER, SWINGLE, and VARS, 701
du Vigneaud, Vincent, Craft, Harold A., and **Loring, Hubert S.** The oxidation of the stereoisomers of cystine in the animal body, 81
Virtue, Robert W., and **Lewis, Howard B.** The iodometric determination of cystine in the urine, 415
— and —. The metabolism of sulfur. XXI. Comparative studies of the metabolism of *l*-cystine and *dl*-methionine in the rabbit, 59

W

Warren, Clark R. See LIGHT and WARREN, 121
West, Edward S., Hoagland, Charles L., and **Curtis, George H.** An improved method for the determination of acetyl values of lipids applicable to hydroxylated fatty acids, 627
Wilkerson, Vernon A. The chemistry of embryonic growth. IV. The requirement of the pig embryo for copper, 541

INDEX TO SUBJECTS

A

Acid-base equilibrium: Blood (SHOCK and HASTINGS) 585
—, microdetermination (SHOCK and HASTINGS) 565
—, nomogram (HASTINGS and SHOCK) 575
Minerals, pregnancy (COONS, COONS, and SCHIEFELBUSCH) 757

Acidity: Gastric juice, composition and, relation (HOLLANDER) 33

Acrylic acid: β-3-Indole-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG) 675

Adolescents: Creatinuria, males (LIGHT and WARREN) 121

Adrenal: Cortex, hormone, adrenalectomy, requirement (PFIFFNER, SWINGLE, and VARS) 701
—, —, assay (PFIFFNER, SWINGLE, and VARS) 701

Adrenalectomy: Blood amino acid, insulin and epinephrine effect (DAVIS and VAN WINKLE) 207
Cortical hormone requirement (PFIFFNER, SWINGLE, and VARS) 701

Albumin: Blood serum, synthetic solution, specific gravity (NUGENT and TOWLE) 395
Egg, heat-denatured, refractivity (BARKER) 667
Milk, globulin, crystalline, from (PALMER) 359

Aldobionic acid: Flaxseed mucilage (NIEMANN and LINK) 205

Alkaloids: Ergot (JACOBS and CRAIG) 547

Allomucic acid: *dl*-Alluronic acid synthesis from (NIEMANN, KARJALA, and LINK) 189

Alluronic acid: *dl*-, allomucic acid synthesis (NIEMANN, KARJALA, and LINK) 189

Amino acids: Basic, blood serum proteins (BLOCK, DARROW, and CARY) 347
—, — — —, heat effect (BLOCK) 343
—, finger nails and cattle horn (BLOCK) 339
—, keratins (BLOCK) 339
Blood, adrenalectomy, insulin and epinephrine effect (DAVIS and VAN WINKLE) 207
Oxidation, silver oxide (HERBST and CLARKE) 769

Ammonia: Excretion, neutrality regulation, relation (BRIGGS) 231

XUM

Amylase: Malt, purification and properties (Sherman, Caldwell, and Doebbeling) 501
—, ultrafiltration (Snell) 43

Aqueous humor: Calcium (Salit) 275
Arsanilic acid: Protein compound formation (Boyd and Hooker) 329
Ascorbic acid: Determination, glucoreductone for 2,6-dichlorophenolindophenol standardization (Kertesz) 483
Azoproteins: (Boyd and Hooker) 329

B

Bacillus: Tubercle. *See Tubercle bacillus.*
See also Lactobacillus acidophilus.
Bark: Slippery elm, mucilage (Anderson) 163
Bilirubin: Isolation and detection (May, Martindale, and Boyd) 255
Blood: Acid-base balance (Hastings and Shock) 575
(Shock and Hastings) 585
— —, microdetermination (Shock and Hastings) 565
—, nomogram (Hastings and Shock) 575
Gas analysis, Van Slyke (Rappaport and Köck-Molnar) 29
— determination, collection methods (Looney and Childs) 53
Glucose ingestion, swine, effect (Eveleth) 559
Swine (Eveleth) 559
Blood sugar: *In vitro* (Neuwirth) 129
True, insulin convulsions (Dotti) 535
Bone: Composition, diet poor in inorganic constituents, effect (Brooke, Smith, and Smith) 141
Bran: Prepared, hemoglobin regeneration influence (Rose, Vahlteich, and MacLeod) 217
Bromine water: Carbohydrates, behavior (Everett, Edwards, and Sheppard) 11
Urine, normal, sugar, behavior (Everett, Edwards, and Sheppard) 11
Buffers: Urease activity, effect (Howell and Sumner) 619
Bufo marinus: *See* Toad.

C

Calcium: Aqueous humors (Salit) 275
Blood serum (Salit) 275
Non-diffusible, protein sols (Eversole, Ford, and Thomas) 107
Vitreous humors (Salit) 275
Carbohydrate(s): Blood serum phosphatase, ingestion effect (Bodansky) 473
Bromine water, behavior (Everett, Edwards, and Sheppard) 11
Metabolism (Dotti) 535
—, sexual variation (Deuel, Gulick, Grunewald, and Cutler) 519
Carbon monoxide: Hemocyanin combination (Root) 239

Carotene: Plant, properties (SMITH and MILNER) 437
Casein: Arsanilic acid and (BOYD and HOOKER) 329
Cystine, alkali effect (JONES and GERSDORFF) 99
Trypsin effect (TAUBER and KLEINER) 271
Ch'an su: (JENSEN and EVANS) 307
Copper: Pig embryo, requirement (WILKERSON) 541
Creatinine: Blood plasma concentration, excretion rate, relation (DOMINGUEZ and POMERENE) 449
Excretion rate, blood plasma concentration, relation (DOMINGUEZ and POMERENE) 449
—, renal (DOMINGUEZ and POMERENE) 449
Creatinuria: Adolescent males (LIGHT and WARREN) 121
Cyanide: Oxidation, induced (HARNED and DEERE) 727
Cystine: Casein, alkali effect (JONES and GERSDORFF) 99
l-, *dl*-methionine, and, metabolism, comparison (VIRTUE and LEWIS) 59
Nitrous acid reaction (LOUGH and LEWIS) 601
-Related sulfur-containing compounds, nitrous acid reaction (LOUGH and LEWIS) 601
Stereoisomers, oxidation, animal body (DU VIGNEAUD, CRAFT, and LORING) 81
Urine, determination, iodometric (VIRTUE and LEWIS) 415

D

Dehydration: Pancreas and intestine enzymes, effect (ROSS and SHAW) 131
2,6-Dichlorophenolindophenol: Standardization by glucoreductone, ascorbic acid determination (KERTESZ) 483
Diiodotyrosine: Thyroid iodine and thyroxine, administration effect (FOSTER) 497
Diphospho-*l*-glyceric acid: Phosphatase, hydrolysis (BODANSKY and BAKWIN) 747

E

Egg: Albumin, heat-denatured, refractivity (BARKER) 667
Hemoblogin regeneration influence (ROSE, VAHLTEICH, and MACLEOD) 217
Embryo: Growth, chemistry (WILKERSON) 541
Pig, copper requirement (WILKERSON) 541
Enzymes: Pancreas and intestine, dehydration effect (ROSS and SHAW) 131
See also Amylase, Glyoxalase, Phosphatase, Urease.
Epinephrine: Blood amino acid, adrenalectomy, effect (DAVIS and VAN WINKLE) 207
Ergot: Alkaloids (JACOBS and CRAIG) 547
Ergotinine: Degradation, alkali (JACOBS and CRAIG) 547

F

Fat: Liver and muscle, comparison (DEUEL, GULICK, GRUNEWALD, and CUTLER) 519

XUM

Fat—*continued:*
Neutral, *Lactobacillus acidophilus* (Crowder and Anderson) 399
Fatty acids: Hydroxylated, acetyl values, determination (West, Hoagland, and Curtis) 627
Ferricyanide: Oleic acid, oxygen absorption, catalyst (Chow and Kamerling) 69
Finger nails: Amino acid, basic (Block) 339
Flaxseed: Mucilage, aldobionic acid (Niemann and Link) 205
Fluorine: -Fed cows, tissues, vitamin C distribution (Phillips and Stare) 351
Food: Hemoglobin regeneration, factors influencing (Rose, Vahlteich, and MacLeod) 217

G

Galactose: *d*-, *d*-galacturonic acid synthesis from (Niemann and Link) 195
l-, *l*-galacturonic acid synthesis from (Niemann and Link) 743
Galacturonic acid: *d*-, *d*-galactose synthesis (Niemann and Link) 195
l-, *l*-galactose synthesis (Niemann and Link) 743
Galacturonide: α-Methyl-*d*-, hydrolysis, kinetics (Morell and Link) 183
Gas: Blood, analysis, Van Slyke (Rappaport and Köck-Molnar) 29
Gas—*continued:*
—, determination, blood collection (Looney and Childs) 53
Gelatin: Arsanilic acid and (Boyd and Hooker) 329
Globulin: Blood serum, synthetic solution, specific gravity (Nugent and Towle) 395
Crystalline, milk, from albumin fraction (Palmer) 359
Glucoreductone: 2,6-Dichlorophenolindophenol standardization, ascorbic acid determination (Kertesz) 483
Glucose: Blood changes, swine, ingestion effect (Eveleth) 559
Glyceric acid: Diphospho-*l*-, phosphatase, hydrolysis (Bodansky and Bakwin) 747
Glycogen: Liver and muscle, comparison (Deuel, Gulick, Grunewald, and Cutler) 519
Phosphorus- and nitrogen-free, solubility and preparation (Somogyi) 245
Glycosides: Methyl-, hexuronic acids, naturally occurring (Morell and Link) 183
Glyoxalase: Determination, manometric (Platt and Schroeder) 281
Growth: Embryo, chemistry (Wilkerson) 541
Tryptophane-deficient diets, various indole acid supplements, effect (Bauguess and Berg) 675
Tryptophane, optical activity influence (Berg) 373

H

Hemocyanin: Carbon monoxide combination (ROOT) 239

Hemoglobin: Regeneration, eggs, cereals, beef liver and muscle, comparison (ROSE, VAHLTEICH and MACLEOD) 217

—, food factors influencing (ROSE, VAHLTEICH, and MACLEOD) 217

Hexuronic acids: Naturally occurring methylglycosides (MORELL and LINK) 183

Synthesis (NIEMANN, KARJALA, and LINK) 189

(NIEMANN and LINK) 195

(NIEMANN, MCCUBBIN, and LINK) 737

(NIEMANN and LINK) 743

Horn: Cattle, amino acid, basic (BLOCK) 339

I

Indole: Derivatives, kynurenic acid production from (BAUGUESS and BERG) 691

Indoleacrylic acid: β-3-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG) 675

Indolelactic acid: *l*- and *dl*-β-3-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG) 675

Indolepropionic acid: α-Oximino-β-3-, tryptophane-deficient diet supplement, growth effect (BAUGUESS and BERG) 675

Indoxyl: Compounds, blood, determination (SHARLIT) 115

Inorganic constituents: Diet poor in, bone composition (BROOKE, SMITH, and SMITH) 141

Inorganic salts: Nutrition (BROOKE, SMITH, and SMITH) 141

Insulin: Blood amino acid, adrenalectomy, effect (DAVIS and VAN WINKLE) 207

Convulsions, blood sugar, true (DOTTI) 535

Intestine: Enzymes, dehydration effect (ROSS and SHAW) 131

Iodide: Thyroid iodine and thyroxine, administration effect (FOSTER) 497

Iodine: Thyroid, iodide and diiodotyrosine administration effect (FOSTER) 497

Iron: Blood (HELMER and EMERSON) 157

K

Keratins: Amino acids, basic (BLOCK) 339

Ketose: Urine, normal (EVERETT, EDWARDS, and SHEPPARD) 11

Kidney: Insufficiency, blood plasma and urine magnesium, magnesium sulfate ingestion, effect (HIRSCHFELDER) 647

Kynurenic acid: Production, indole derivatives (BAUGUESS and BERG) 691

—, tryptophane, optical activity influence (BERG) 373

XUM

L

Lactic acid: *l-* and *dl-β*-3-indole-, tryptophane-deficient diet supplement, growth effect (Bauguess and Berg) 675

Lactobacillus acidophilus: Chemistry (Crowder and Anderson) 399, 487

Fat, neutral (Crowder and Anderson) 399

Phosphatide fraction (Crowder and Anderson) 487

Lipids: Acetyl values, determination (West, Hoagland, and Curtis) 627

Liver: Beef, hemoglobin regeneration influence (Rose, Vahlteich, and MacLeod) 217

Glycogen and fat content, comparison (Deuel, Gulick, Grunewald, and Cutler) 519

Lycopersicum esculentum: *See* Tomato.

Lysergic acid: (Jacobs and Craig) 547

M

Magnesium: Biological fluids, colorimetric determination, Kolthoff method (Hirschfelder and Serles) 635

Blood plasma, renal insufficiency, magnesium sulfate ingestion effect (Hirschfelder) 647

Excretion, renal insufficiency, magnesium sulfate ingestion effect (Hirschfelder) 647

Magnesium sulfate: Blood plasma and urine magnesium, renal insufficiency, ingestion effect (Hirschfelder) 647

Malt: Amylase, purification and properties (Sherman, Caldwell, and Doebbeling) 501

—, ultrafiltration (Snell) 43

Mannosaccharic acid: *l-*, *l*-mannuronic acid synthesis from (Niemann, McCubbin, and Link) 737

Mannuronic acid: *l-*, *l*-mannosaccharic acid synthesis (Niemann, McCubbin, and Link) 737

Marine products: (Bergmann) 317, 553

Mercuric reagents: Alkaline, nitrogenous substances, precipitation (Everett, Sheppard, and Johnson) 1

Methionine: *dl-*, *l*-cystine and, metabolism, comparison (Virtue and Lewis) 59

α-Methyl-*d*-galacturonide: Hydrolysis, kinetics (Morell and Link) 183

Methylglycosides: Hexuronic acids, naturally occurring (Morell and Link) 183

N-Methyl uridine: Uridine chemical constitution, relation (Levene and Tipson) 385

Minerals: Acid-base balance, pregnancy (Coons, Coons, and Schiefelbusch) 757

Mollusk: Sterols (Bergmann) 317

Mucic acid: Allo-, *dl*-alluronic acid synthesis from (Niemann, Karjala, and Link) 189

Mucilage: Flaxseed, aldobionic acid (Niemann and Link) 205

Slippery elm bark (Anderson) 163

Muscle: Beef, hemoglobin regeneration influence (Rose, Vahlteich, and MacLeod) 217

Glycogen and fat content, comparison (Deuel, Gulick, Grunewald, and Cutler) 519

N

Nitrogenous substances: Urine, precipitation, alkaline mercuric reagents (Everett, Sheppard, and Johnson) 1

Nitrous acid: Cystine and related sulfur-containing compounds, reaction (Lough and Lewis) 601

Nomogram: Blood acid-base (Hastings and Shock) 575

O

Oatmeal: Hemoglobin regeneration influence (Rose, Vahlteich, and MacLeod) 217

Oleic acid: Oxygen absorption, ferricyanide as catalyst (Chow and Kamerling) 69

Optical activity: Tryptophane, growth and kynurenic acid production, influence (Berg) 373

Ostreasterol: Chemistry (Bergmann) 553

P

Pancreas: Enzymes, dehydration effect (Ross and Shaw) 131

Phenylalanine: Protein material, spectroscopic identification (Ross) 531

Phosphatase: Blood serum, new born puppies (Bodansky) 717

— —, non-osseous origin, carbohydrate ingestion effect (Bodansky) 473

Diphospho-*l*-glyceric acid hydrolysis (Bodansky and Bakwin) 747

Phosphatide: *Lactobacillus acidophilus*, fraction (Crowder and Anderson) 487

Phosphorus: Inorganic, blood serum, new born puppies (Bodansky) 717

Pigment: Tomato, American red and purple (Matlack and Sando) 407

—, chemistry (Matlack and Sando) 407

Plant: Carotenes, properties (Smith and Milner) 437

Poison: Toad, chemistry (Jensen and Evans) 307

Pregnancy: Mineral acid-base balance (Coons, Coons, and Schiefelbusch) 757

Propionic acid: α-Oximino-β-3-indole-, tryptophane-deficient diet supplement, growth effect (Bauguess and Berg) 675

XUM

Protein(s): Azo- (Boyd and Hooker) 329
Blood serum, amino acids, basic (Block, Darrow, and Cary) 347
— —, — —, basic, heat effect (Block) 343
— —, various origins, relationship (Block, Darrow, and Cary) 347
Phenylalanine, spectroscopic identification (Ross) 531
Sols, calcium, non-diffusible (Eversole, Ford, and Thomas) 107
Tubercle bacillus, human (Heidelberger and Menzel) 655

R

Rennin: Chemical nature (Tauber and Kleiner) 259
Ribose-5-phosphoric acid: Synthesis (Levene and Stiller) 299

S

Serine: Synthesis (Dunn, Redemann, and Smith) 511
Sex: Carbohydrate metabolism, effect (Deuel, Gulick, Grunewald, and Cutler) 519
Silver oxide: Amino acid oxidation (Herbst and Clarke) 769
Sterol(s): Mollusks (Bergmann) 317
Ostreasterol (Bergmann) 553
Stomach: Gastric juice, acidity and composition, relation (Hollander) 33
— secretion (Hollander) 33
Sugar: Urine, normal, nature (Everett, Edwards, and Sheppard) 11
Sulfur: Metabolism (Virtue and Lewis) 59

T

Testes: Hormone, alkali effect (Gallagher and Koch) 611
Thyroid: Iodine, iodide and diiodotyrosine administration effect (Foster) 497
Thyroxine, iodide and diiodotyrosine administration effect (Foster) 497
Thyroxine: Thyroid, iodide and diiodotyrosine administration effect (Foster) 497
Tissue: Analysis (Graeser, Ginsberg, and Friedemann) 149
Toad: Poisons, chemistry (Jensen and Evans) 307
Tropical, secretion (Jensen and Evans) 307
Venom, Chinese, Ch'an su (Jensen and Evans) 307
Tomato: American red and purple, pigment (Matlack and Sando) 407
Pigment, chemistry (Matlack and Sando) 407
Trypsin: Casein, effect (Tauber and Kleiner) 271
Chemical nature (Kleiner and Tauber) 267
Tryptophane: -Deficient diets, various indole acid supplements, growth effect (Bauguess and Berg) 675

Tryptophane—*continued:*
Metabolism (BERG) 373
(BAUGUESS and BERG) 691
Utilization, growth and kynurenic acid production, optical activity influence (BERG) 373

Tubercle bacillus: Human, protein (HEIDELBERGER and MENZEL) 655

Tyrosine: Diiodo-, thyroid iodine and thyroxine, administration effect (FOSTER) 497

U

Urease: Activity, buffer effect (HOWELL and SUMNER) 619

Uridine: Chemical constitution, N-methyl uridine, relation (LEVENE and TIPSON) 385

Uronic acids: Microdetermination (BURKHART, BAUR, and LINK) 171

V

Venom: Toad, Chinese, Ch'an su (JENSEN and EVANS) 307

Vitamin: B_2. *See also* Vitamin G.
C, fluorine-fed cows, tissues, distribution (PHILLIPS and STARE) 351
—. *See also* Ascorbic acid.
E, properties (OLCOTT and MATTILL) 423
G (B_2) requirement (SHERMAN and ELLIS) 91

Vitreous humor: Calcium (SALIT) 275

W

Wheat: Whole, hemoglobin regeneration influence (ROSE, VAHLTEICH, and MACLEOD) 217

Z

Zein: Arsanilic acid and (BOYD and HOOKER) 329

XUM